

# Graphing Oxygen Concentration Profiles

## RUBRIC

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### Rubric: Oxygen Concentration Profile

#### Scatter Plot

- \_\_\_\_\_ The graph has a title.
- \_\_\_\_\_ The independent and dependent variables are reversed on the graph to simplify visualization of the mat. The independent axis (depth) is now along the y-axis and the dependent axis (oxygen concentration) is now along the x-axis.
- \_\_\_\_\_ Units or increments on the graph are equally spaced and identified.
- \_\_\_\_\_ The graph has a key or legend.
- \_\_\_\_\_ Points are plotted correctly on the graph reflecting an accurate use of data.
- \_\_\_\_\_ Lines are drawn connecting the data points in the scatter plot.
- \_\_\_\_\_ The graph is neatly drawn and organized using Excel and labels are clear and easy to read.
- \_\_\_\_\_ Separate colors are used for each profile of oxygen concentration. Light, Dark, and non-steady states should be graphed.

### Rubric: Oxygen Concentration Profile

#### Graph Interpretation Summary

- \_\_\_\_\_ *The introduction to the paper contains:*
  - \_\_\_\_\_ A summary of the experiment.
- \_\_\_\_\_ *A thesis statement that indicates why the graph looks the way it does.*
- \_\_\_\_\_ *The body includes an explanation of how one can draw conclusions from the graph. For example, how does the graph picture show?*
  - \_\_\_\_\_ If the mats are producing oxygen?
  - \_\_\_\_\_ If the mats are consuming oxygen?
  - \_\_\_\_\_ The depths where production and consumption are highest?
  - \_\_\_\_\_ The depths where production and consumption are the lowest?

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## Rubric: Oxygen Concentration Profile

### Graph Interpretation Summary cont.

\_\_\_\_\_ *The conclusion contains:*

\_\_\_\_\_ A summary of the inferences drawn from the experiment.

\_\_\_\_\_ Explains the scientific processes demonstrated by the experiment.

\_\_\_\_\_ What would explain the differences in the profiles?

\_\_\_\_\_ Are these mats a source or sink of oxygen?

\_\_\_\_\_ An explanation of variation in data and error analysis.

\_\_\_\_\_ *An idea for further research or other questions relating to the Oxygen Concentration experiment.*

\_\_\_\_\_ *The paper contains an accurate analysis of data.*

\_\_\_\_\_ *The paper uses correct spelling, punctuation, and grammar.*

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#### Credits

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#### Teacher's Guide:

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